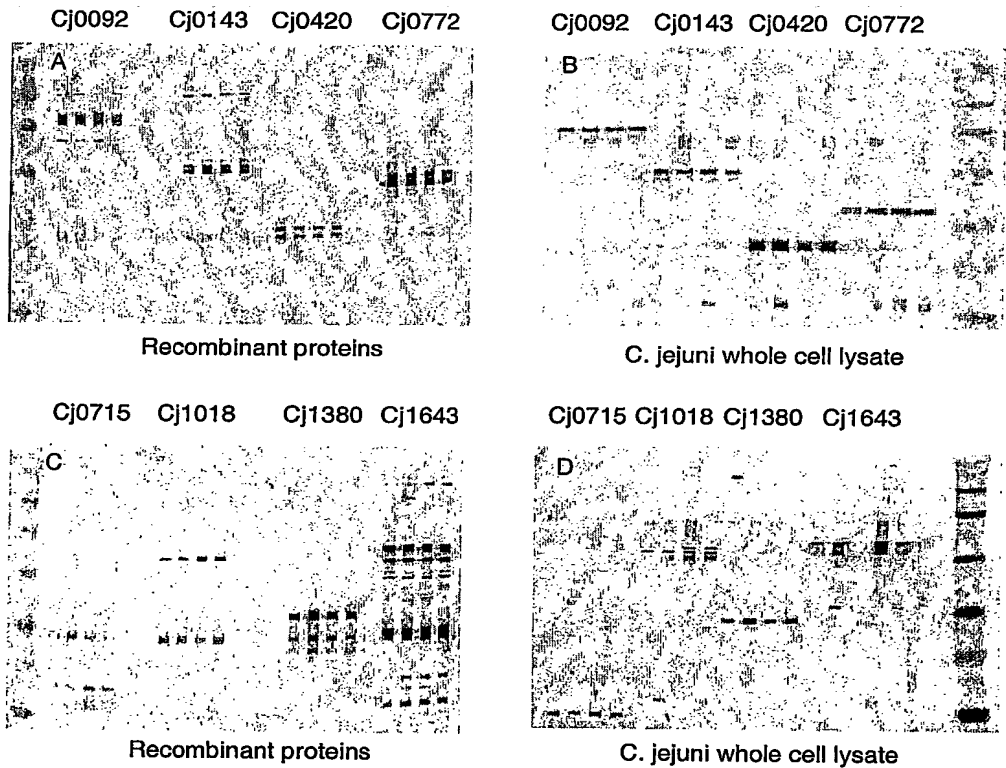
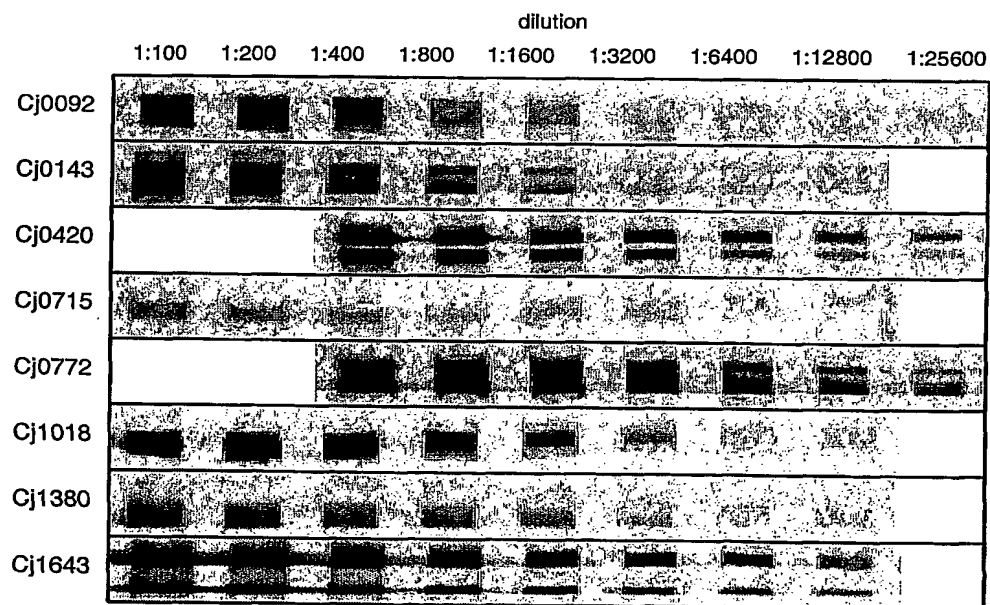


Fig. 1



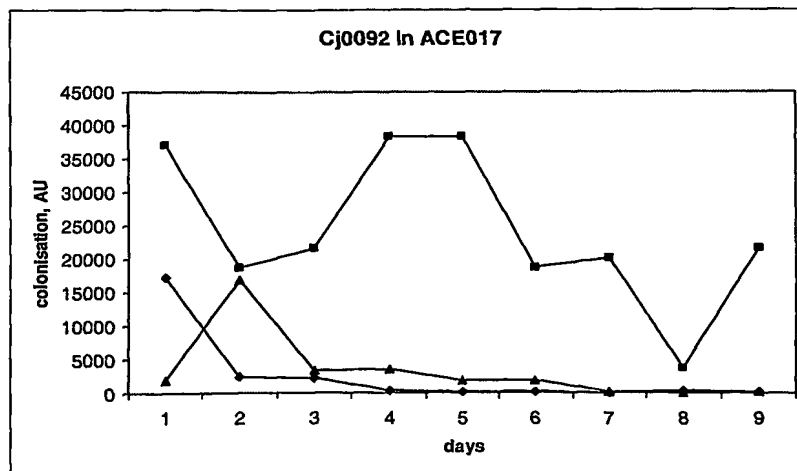
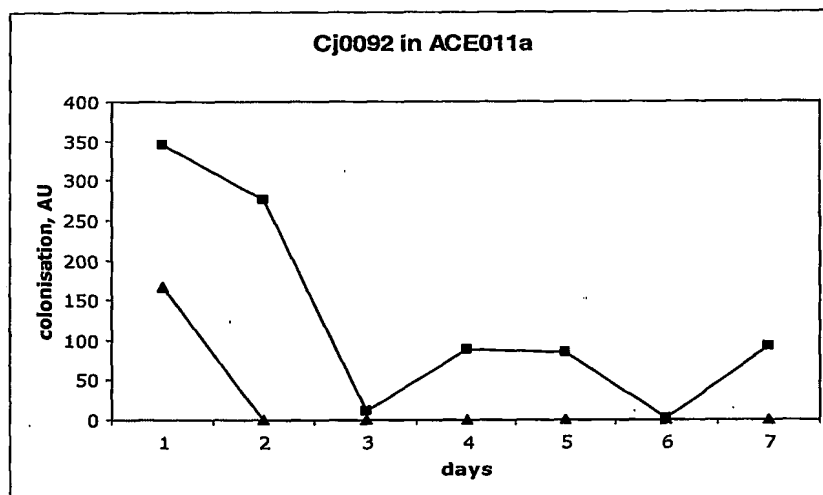
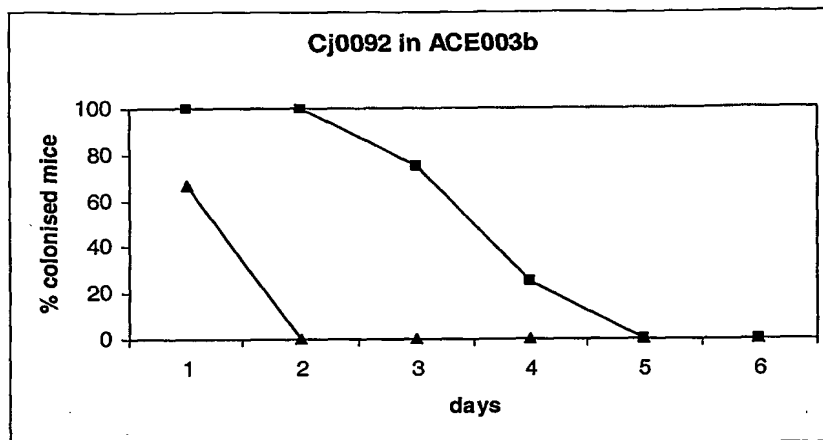
2/20

Fig. 2



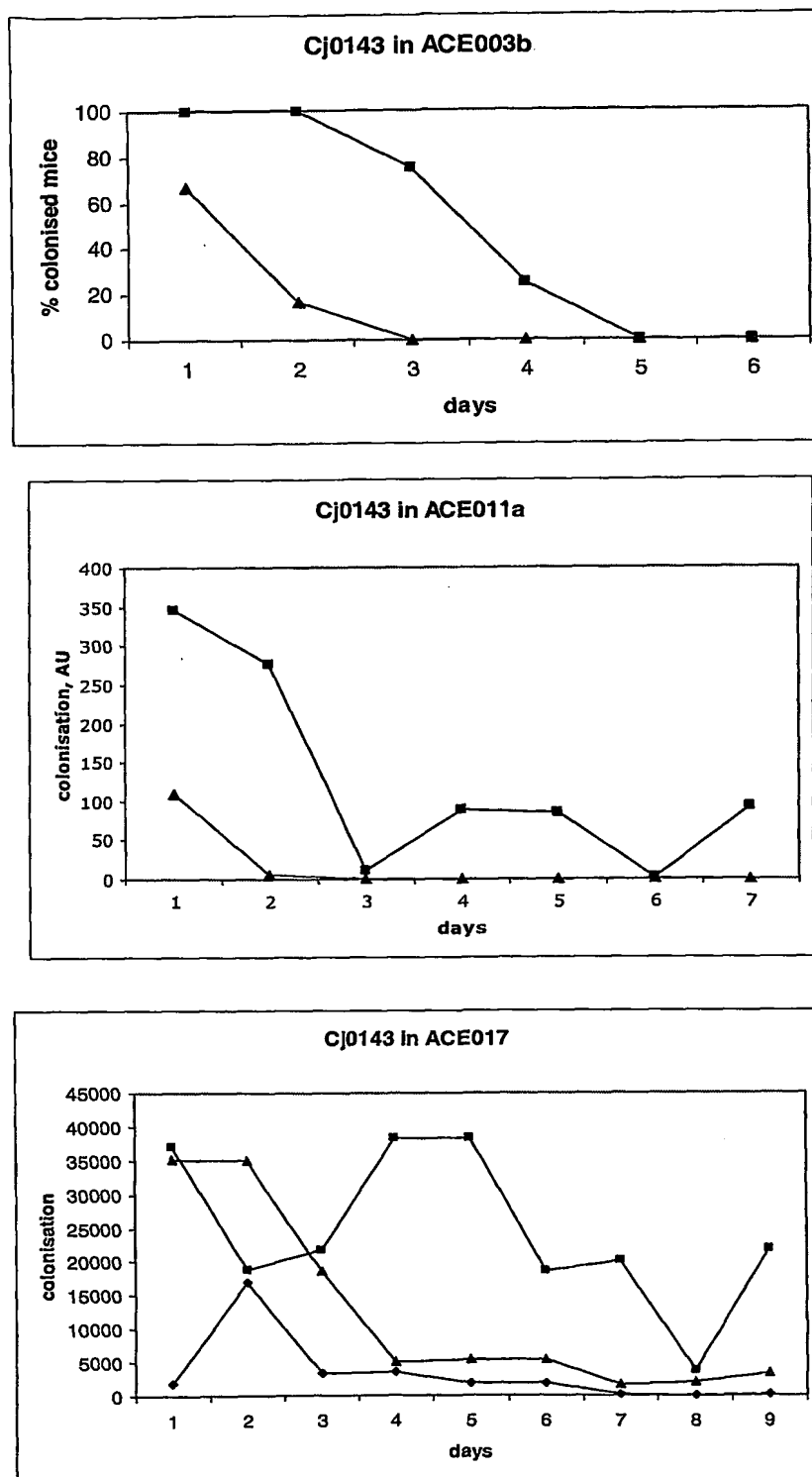
3/20

Fig. 3

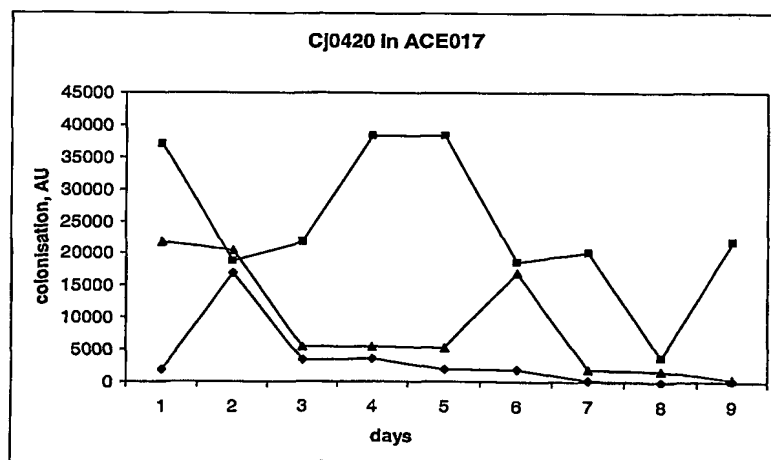
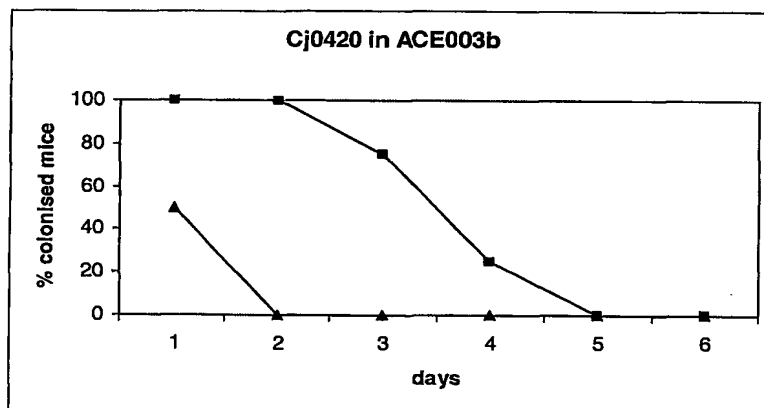
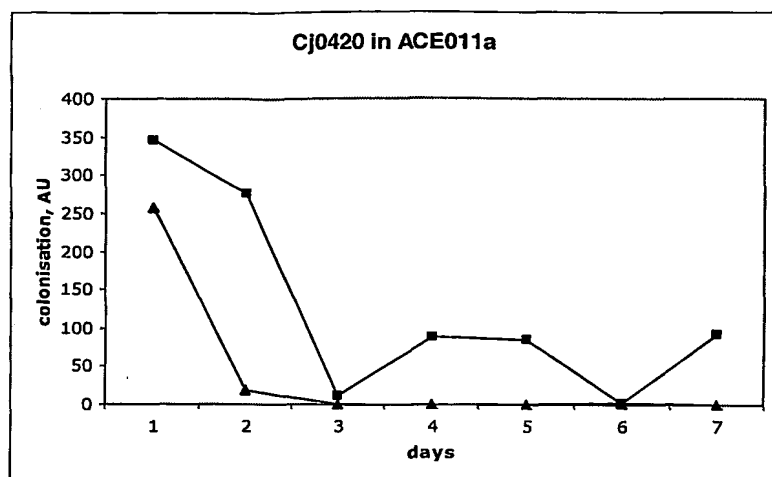


4/20

Fig. 3

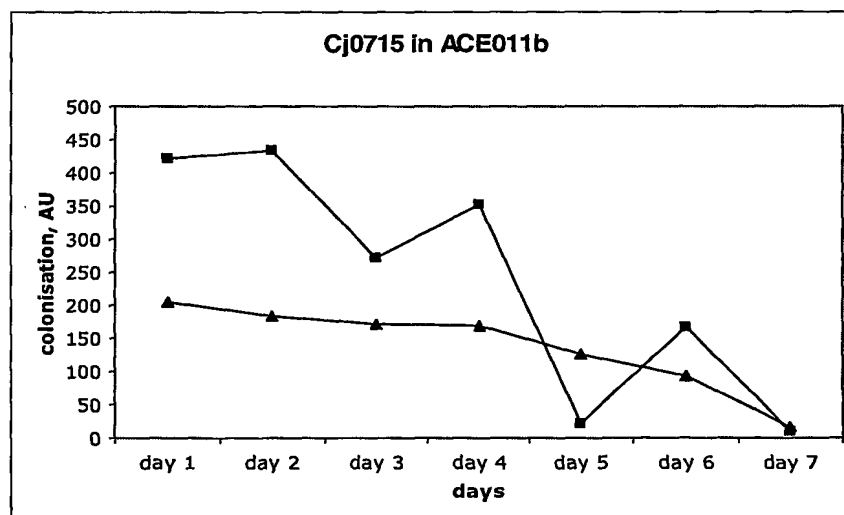
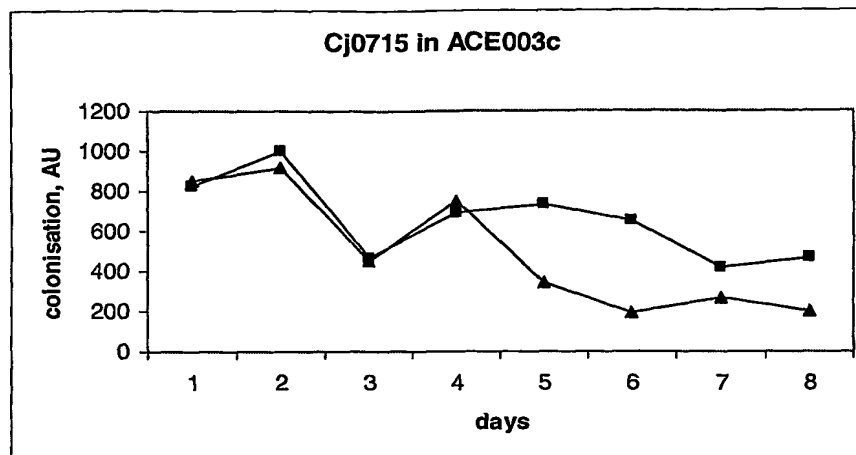


**Fig. 3** 5/20



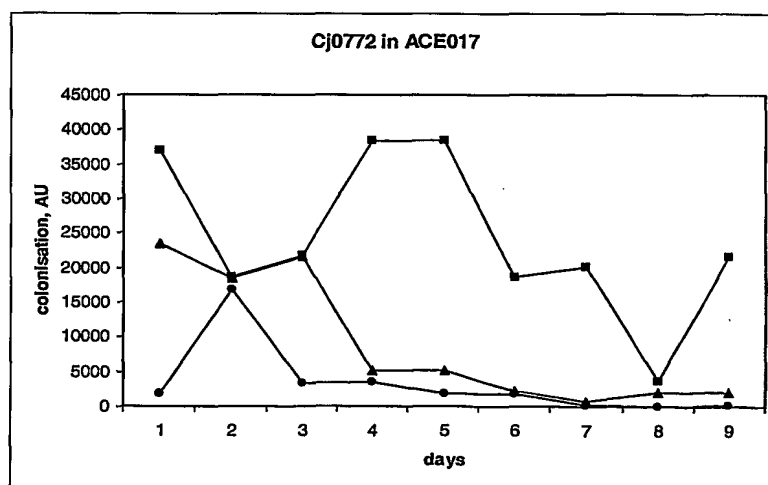
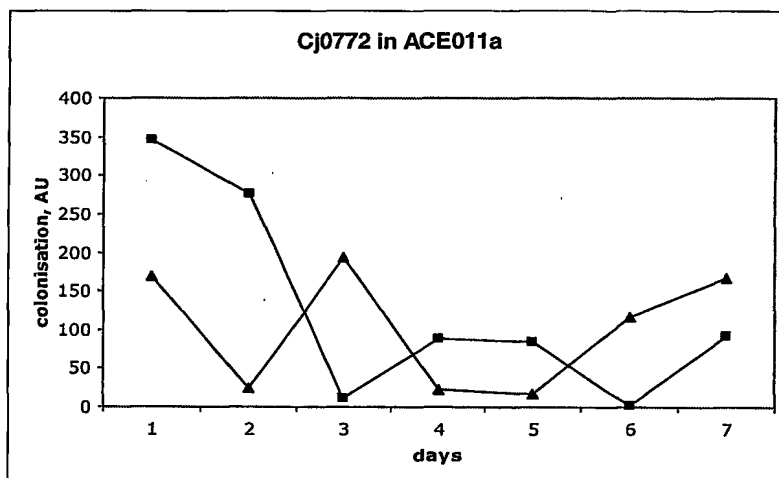
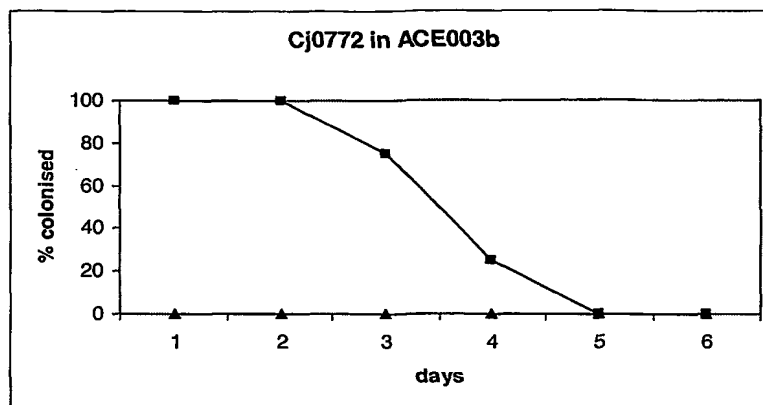
6/20

Fig. 3



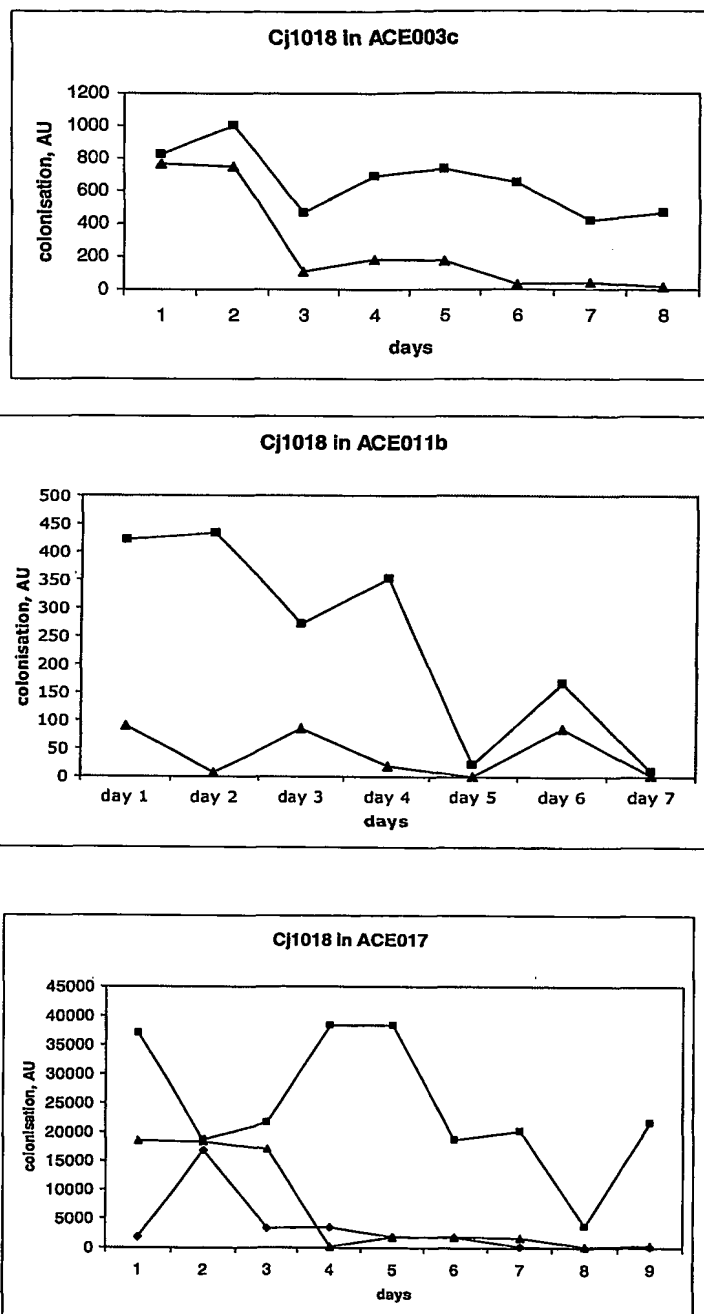
7/20

Fig. 3



8/20

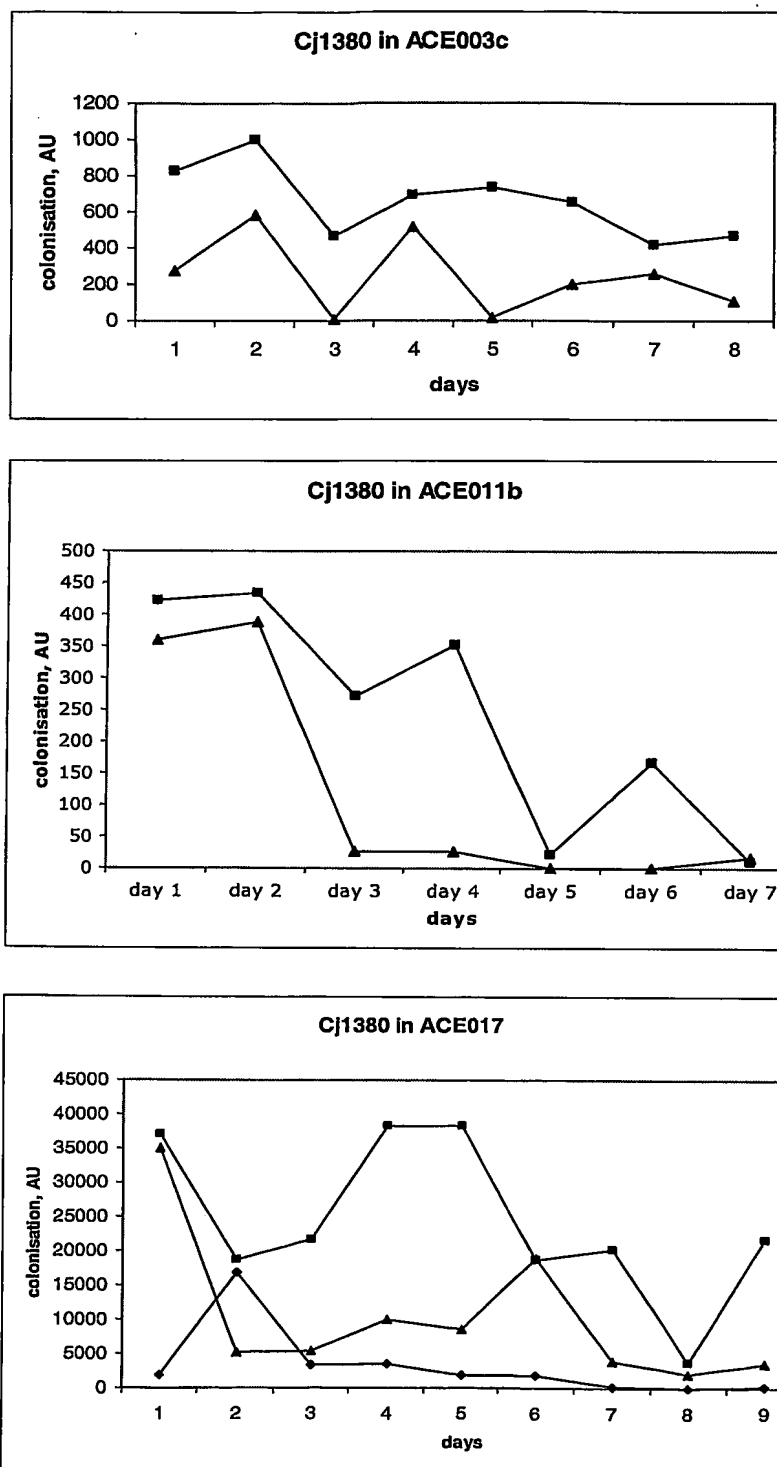
Fig. 3





9/20

Fig. 3



10/20

Fig. 3

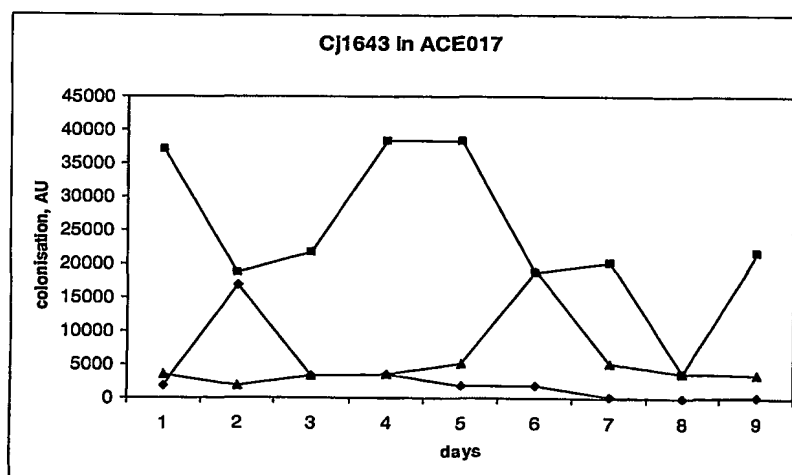
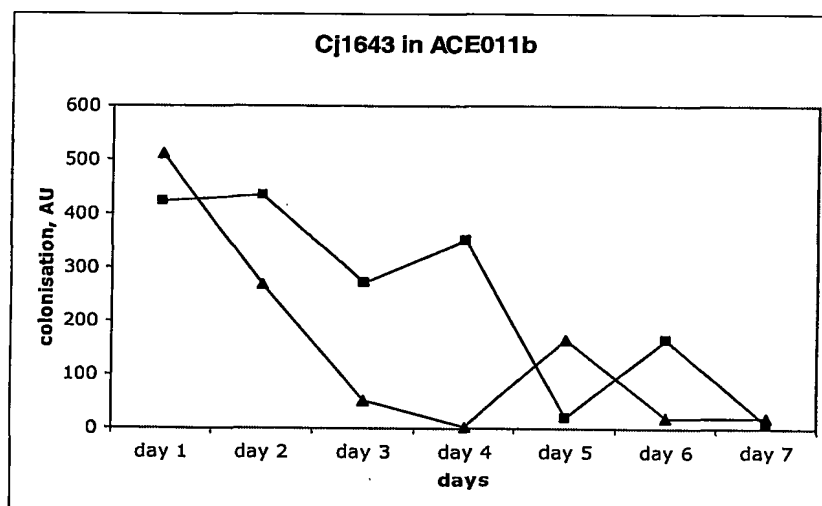
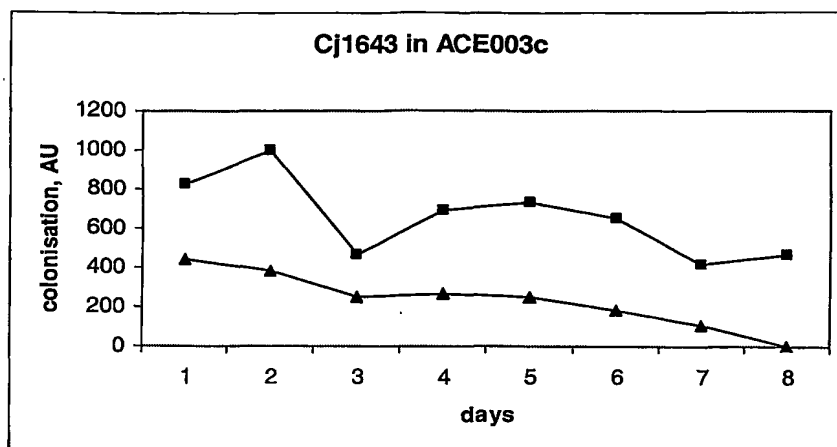


FIG. 4

11/20

## Sequence listing

SEQ ID NO:1

ACE83 Cj0092

>AnrP630851 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILFIGSLVMASLLYAQGSQPVEITQQDINTQNMESDASTKDITPKSIEDFFEEFADNFGIEYGITKD  
GKTFYTGKSTVAVNDTDPQFAQALQNA YQKAMLNQSEFIRDAFGRIATSKI QNYEADNSTNAKEFDELP  
KGDKVDQILNKLTQLAGAQLDKALKDLGIDTNSLSEDRKKTLLKQEFNLKMTMTNAIGSMSGLVPVQTTIVT  
QRRGEYDVGVVAVISNKTRQLAKDMALARQSAIKGKGKAISEYLPKDTKGFLNEYGIRLVYDENGAPIIL  
SYGNWGYVADPSNAKKTNILEDRAKETALTMADAAIIIEFINTNLSLKDERTTGDYEEIIKQSINVDSS  
TQEQTQNTNIIDKVNISKIKASASGKIRGIRTLKKWSYTSENGIEHVGA VRFYSENLAN TNEALNSKSN  
ATKNEAKKSSSIQRSSNVVNSMDDF

SEQ ID NO:2

ACE 5 Cj0005

>AnrP544820 (NC\_002163) putative molybdenum containing oxidoreductase  
[C.  
MKQNDQKENRRDFLKNIGLGLFGISVLSNFSFENFLGSKALAKELPDFKIEGKKDLIYHGEKPLTAETEI  
YALDSDFTKPENFFVRNNGLPSPLETIKERLHKGWTL EIDGESIINKKSYTIEDLKKKFKTYTYALTVEEC  
GGNGRSEVIPSTKGTQWGYGAVACGRWTGVRLKDILKDCGIKNDAVYIGYIGIDTKLNGEETSPI SRGVP  
ISKALQDETLIAWAYEGKDIPLVNGYPLRLVCGGYPA STSGKWLYKISVRNKIHDGEKMEGSYKVPVNPV  
KPGDFNYKGEMKIIIESMPIRSVITN IKN GSEIKANKKFEVRGKAWAGELEVSEVYVSN DYGV TWTKAKVE  
KPLNRLAWQKWSAQIS IPTKGYE IWARAIDSQGSQPMVLAQWNPGGYINNACHRVNVYGV

SEQ ID NO:3

ACE 29 Cj0029

>AnrP372217 (NC\_002163) cytoplasmic L-asparaginase [C. jejuni]  
MKKAKSRIAILGTGTTIAGFIDSTIATTGYAAG AIDIDVLIKAVPQIRDLADISWEQIANIDSSNMCD E I  
WLRLAKKI AKLFAEGIDGVVITHGTD TMEETAYFLNLTIKSDKPVVLVGAMRPST AISADGPKNL YNAVA  
LVVNKEAKNKGVMVAINDKILSARGVVKTHSLNVD AFSSPDFGDLGYIVDGKVFFYNNVVIKAHTKNAPFD  
VSKLTSLPKVDILYSYNDGSGVA AKALFEHGTGKIVVAGSGAGSIHKNQKDV LKELLKGLKVVVSSRV  
VAGCVAVS DSDEKLGFI SAEDLNPQKARVLLMLALTKTSDPKKIQEYFLKY

SEQ ID NO:4

ACE 37 Cj0037

>AnrP501075 (NC\_002163) putative cytochrome c [C. jejuni]  
MKKHILLGLCLSLSLSAKSVSDYKVGEELSDKEGVEYFKELSKRPVQEWPNKNLSINDVPKGKQGD LIR  
YGIELLSKTESTLGPYSKLKTSNEVNCISCHMDNDGNGLP GTTKYVIPFLNILNNYPRLDIETMKIISV  
EDRIRGMGGTDSHRFPND SKEMKAILAYFKWLKEAYGIKDGVKLEGDFFAKMNF PNRPADPVRGKKLFEE  
NCVACHGERGLGVKNDNYEQGSGHLYPSLLIYPDGGHMAMI PFLARFLKSAMPFGASADNPILSD EDALD  
IAAVVNTG FVRMPITTTENRAGLDTAYSKSPSLKPEYFASPQQNLDPKEYIKVKYGPWKNPNHFPGE

SEQ ID NO:5

ACE 84 Cj0093

>AnrP666574 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKIIKILFLGLFLSLSLNAKVITTTSTKSS TGE GTGLTREDAINNAIEAIGKMSGVSINSLKKSNTSVS  
TDNSGSNIQDNYSEQISKATKGRADTYEINSVEQDANGKYTANVTIFKTTTTTKKYQAPGLSADNRRSITV  
FDSTPDAAKRGIGSALQQKIISDLLQSRKFNVLD RDSSGY YEMEKALIKSGDAASDEVYKLNMLATDYI  
LLFSISGLEGKQKTSNLTGKSKTEIEVIVDYRVLLFATRQIKFSNTLSMKVNLKDNSLSANETALKQIAN  
RIAGDILNAIYPLKVASVENNEVIFSQSLNQGDVYECFALGKVIKDTYTKENTGRVESKTGSIEITRTSP  
KFSYAKITEG SVKVG DICRPLSNTGSGNGYTIGRDANYQTQEGGGVNLGF

SEQ ID NO:6

ACE 98 Cj0107

>AnrP732169 (NC\_002163) ATP synthase F1 sector beta subunit [C. jejuni]  
MQGFISQVLGPVVDVDFNDYLPQINEAIVVNFESEGGKHKLVLEVA AHLGDNRVRTIAMDMDGLVRGLK  
AEALGAPISVPVGEKVLGRIFNVTGDLIDEGEEISFDKKWAIHRDP AFEDQSTKSEIFETGIKVVDLLA  
PYAKGGKVGLFGGAGVGKTVIIMELIHNVA FKHSYSVFAGVGERTREGNDLYNEMKESNVLDKVALCYG  
QMNEPPGARNRIALTGLTMAEYFRDEMGLDVLMFIDNIFRFSQSGSEMSALLGRIPSAVG YQPTLASEMG  
KFQERITSTKKSITSVQAVYVPADDLTDPAPATVFAHL DATTVLNRAIAEKGIYPAVDPLDSTSRMLDP  
NIIGEEHYKVARGVQSVLQKYKDLQDI IAILGMDELSEEDKL VVERARKIEKFLSQPFFVAEVFTGSPGK  
YISLEDTIAGFKGILEGKYDHLPENAFYMVGNIDEAIAKADKLKG

FIG. 4

12/20

SEQ ID NO:7

ACE 103 Cj0112

&gt;AnrP511634 (NC\_002163) periplasmic protein [C. jejuni]

MKKIVAIFLVFLGSLWAEDPVIDVNSGVVLPKIIIVKDNSNLSDENLKKSFYNIIVNDLKVSSNFEVVAN  
ATETSNIYIFCYPTLNKNGNTLSLVKIKAGGSDKSEQTYTLNGLEQYYPFLAHKSVKASVNALGLAPVDWMD  
HKILIA RNSSSKKSQIIMADYTLTYQKVIVDGGNLNLPKWGNKEQTLFFYYTAYDHDKPTLYRYDLNTNKA  
SKILSSGGMVVASDVNVDGSKLLVTMAPKQPDVLYDLNTKNLTQLTNYSGIDVNGNFIGSDDSKVVFV  
SDRLGYPNIFMQDLNSNSAEQVVFHGRNNSAVSTYKDFLVYSSREPQAGVFNIYLSINSIDYIRQLTAN  
GKNLFPFRSSDGGSI VFIKYLGAQSALGVIRVNANKTFYFPLRVGKIQSIDW

SEQ ID NO:8

ACE 134 Cj0143

&gt;AnrP57234 (NC\_002163) periplasmic solute binding protein for ABC transport system [C. jejuni]

MKKIILFILSLGIFYTFTQAKNLEQEQTSSNLVSVSIAPQAFFVKKIAANTLDVNVLPPNSNEHNFEF  
KPSTMKKLEKSDIYFTIGLEFEKVFPTDKFKQNF PKLQVINMQKNIALIQTHDTHEHSHEHEHHEHGHFDP  
HTWLDPILVQTMALNIYDTLIQYQONENLYKENLDKFLAELDSLNLQIASKLEKLKNREFVVYHPSWTY  
FAKRYNL TQIPVEILGKEPKSKDLQKLITLMKDKNLKVI FVQNGFPENAAKTLAKECDAKIYKIDHLSYD  
WENELLKTADAFSHNL

SEQ ID NO:9

ACE 159 Cj0169

&gt;AnrP829849 (NC\_002163) superoxide dismutase (Fe) [C. jejuni]

MFELRKLPHYDTNAGDFLSAETFSYHHGKHNTYVTNLNLIKDTEFAGKDLVSIKTSNGGVFNNAQV  
YNHDFYFDCIKPSTGCGGCGSIDANLQAALKEKEFGSLENFKAEFIKGATGVFGSGWFVLVYNTKNQK  
LEFVGTSNAATPITEDKVP LLVDVWEHAYYVDHRNARPAYLEKPHYAHINWEFVAKAYEWALKEGMGSVS  
FYANELHPVK

SEQ ID NO:10

ACE 183 Cj0193c

&gt;AnrP139712 (NC\_002163) trigger factor (peptidyl-prolyl cis /trans isomerase, chaperone) [C. jejuni]

MEVKAKQLDSVNATASVKIPSGMIKSEVENLAKKASKSVKMDGFRPGKVPVSAVLKRYERELTQDAEQNL  
FKSAVNSALQELKKENKELVGEPYFEKFDKRDGEIIAELILSFKPEIKLEGEYKLIPEYQTPKVSKEID  
EKKDELKRFKATPEAIKTKRALKEGDFAKFDFEGFVDDKAFEGGKAENYVLEIGSKQFIPGFEDGMVGMK  
IGEEKDIKVTFPKEYGAHLAGKDAVFKVLHEIQELKIPELDDEMLKLLPGEEKASVEVLDEKLKEQI  
KNEKLFKLVDNDELKKGKADALIEKYNF DL PKGIVEQETDMQMAAFNTFSEKIEELKASKEKYQEK RDS  
FKEEAQKSVKLTFIIDELAKLRKIEVNDQELIQAIYFEAYRYGMNPKEHLENYKKQ GALPAVKMALIEEK  
LFNDIFIPKTEKSEKVSKEKEDK

SEQ ID NO:11

ACE 259 Cj0285c

&gt;AnrP467527 (NC\_002163) chemotaxis protein [C. jejuni]

MFDENIVKTGSNEMELVDFRIFKQGHDKVYEGIYGVNVSKVREIIKIPSLTELPGVPDYIEGIFDLRGVV  
IPVNLAKWMQITESTMLKPRVIITEFSNIIIGFIVHEAKRIRINWKDIEPATFSTGSGALDKGKIT  
GVTRIENDEVL LILDLESVVEDLGIYAPKTDIDFGKIEKFTGTALILDDSM TARKRVKEMMQMGFQVVE  
AKDGVGEGINKLEELS QIYGESLNDTLKIIIVSDVEMPQMDGFHFAARIKEDPRFKDIPIVFNSSLSNEFMN  
EKG VQEAGGEGYL VKFNASDFFNEIAKVIKKHQSQEQG

SEQ ID NO:12

ACE 332 Cj0358

&gt;AnrP681041 (NC\_002163) putative cytochrome C551 peroxidase [C. jejuni]

MKVKSLLIASLVAFSSSLNAA SLIDEAKNSGLVALPKDQKGVDEILKQNGVKASEFTLEKAE L GK KLYFEP  
RLSKSGIISCN TCHNVGLGTDGISTAI GHKWTANPHLNSPTVYNAV LNNTQFWDGRAGT LADQAKGPI  
QADPEMATPAKLAVEKISSLPEYVSEFKKIYKSGVNFNDIADAIANFERTLITPSRFDKFLLEGDEKALT  
KEEQKGLKLFIDKGCVACHNGVNLGGNMQAFEVAGKYKFANLGDFKGDANGMVKTPTLRNVAETAPYFHN  
GAIWN LKDAIKEMGSVQLGIKISDKEAKSIETFLKSLTGTKPAIVYPQLPISTEKTPKPEL

SEQ ID NO:13

ACE 419 Cj0448c

&gt;AnrP569688 (NC\_002163) putative MCP-type signal transduction protein [C. jejuni]

MFGSKINHSD LQKLEEBENKNLTHKIEKFQSENLELKNKITSLEQAALSKLKTDLNVL LTGVLKNITII  
QGDML ENVNKA EVISSYSKTS LAEMDELNHIAN SINASLGNITESANKTRDVAGTLHRSVDEITNVINLI  
KDVS DQTNLLALNAAIEAARAGEHGRGFAVVADEVKRLAEKTQKATTEVEMNINLLKQANANEMYTQSEQV  
EKISIDSN AHIMSFSEKFTHLVNEAHSTNSNAVGIASEAFVSLAKLDHIAFKLNGYKEIFSKSGKQLADH  
TSCRLGKWLASTGKERFGQNK SFLKINEPHEKVHENMNAIT IANTEDISKDITQHSIINKCEVAENASL

## FIG. 4

13/20

DLFNVFKEMLDESDH

SEQ ID NO:14

ACE 420 Cj0449c

>AnrP852550 (NC\_002163) hypothetical protein Cj0449c [C. jejuni]  
MLHEYRELMSELKKGDAHFDFKLFDRHNELDMMIKDAEEGRSLSSMEISTLKKEKLHVKDELSQYLANYK  
K

SEQ ID NO:15

ACE 481 Cj0511

>AnrP255677 (NC\_002163) putative secreted protease [C. jejuni]  
MMELILKTKRFFAGLAGFATTFILCLFLTSHLQAKVDQKEEQVQKRLEALDKLTKTLAIVEQYYVDDQNI  
SDLVDKSLSGLLSNLDAHSSFLNEKDFNDMKIQTNGEFGGLGITVGMKDGALTTVVSPIEGTPADKAGIKS  
GDIIILKINDEATLGINLNDVDMRGKPKTQITLTIFRKGATKPFDDVTLTREIIESVYAKMIENENIL  
YLRVTNFDKNVVDVASKELKKYPNVKGVILDLRNNPGGLLNQAIGLVNLFVDKGVIVSQKGRIASENQEY  
KADPKNKISNASLVVLVNGGSASASEIVSGALQDLKRGVIVGENTFGKGSVQQIIPINKTEALRLTIARY  
YLPSGRTIQAVGVKPDIEVFPKGVNTQEDGFSIKESDLKQHLESELEKIDKNKKEDKQENKDNKNLISQK  
QINDDAQLSAIDTIKILNIKQGG

SEQ ID NO:16

ACE 528 Cj0559

>AnrP252410 (NC\_002163) oxidoreductase [C. jejuni]  
MKKIDLIVVGAGPTGIGCAVEAKLKNKEVLILEKSNNICQTLMOFYKDGKRVDAKAYKGCEGTNHGHVPFEE  
DGTKESTIETFQNALKEHNIEVEFGSEVESVKNENGVLVSTAKGVYECKNIIVAIGRMGKPNKPDYKLP  
MTLTKIINFNANSVLGNEKILVVGGSNSAAEYAVDLANSNQVSLCYRKKEPTRLNDINLKDIEAGNSGK  
VELKLGIDINEVEDDNGKAKVNFTDGTSDIYDRIIYAIGGSTPLDFLQKCGINVDDKGVPLMDENKQSNV  
KGIFVAGDIATKNGASIVTGLNDAVKILSVL

SEQ ID NO:17

ACE 582 Cj0613

>AnrP916533 (NC\_002163) possible periplasmic phosphate binding protein  
[C. jejuni]  
MKKILSLSVTSLALCGALNAVDLKIAGSSSTVYPFTSFVAEEYASIKNTKTPIVESLGTGGGFKVFCEGTT  
DISNASRPMKLSEFETCKKAGVTDIVGMMIGYDGIvlaQNKTNAPLNTKKELFLALAKEIPQNGKLIPN  
PYTNWNQINKNLNPNRKISVYGPPSSSGTRDTIEELVMSDVSKKIPEYKGEYKTIRQDGAYIPSGENDNLI  
VSKLTIDKDAFGIFGYSLVNSDKINAANIDGVTPEESIADEKYELARSLFIYINAKKNPKEAFDFAK  
IYMSDDLAKSGGELEKIGLVPLSDDKLKASQKHVEDRKILNDELVKAGKVF

SEQ ID NO:18

ACE 605 Cj0636

>AnrP126795 (NC\_002163) NOL1\NOP2\sun family protein [C. jejuni]  
MQNILSSFAQEKNVCFANTLKTSIEELEKEFLKQNLKFKKINVICYLFDKADKAILSSMKAFNEAHFYI  
QNYSSYLKCNLEVKAGQSVLDMCAAPGGKSINLANFMQNTGYLACNEMSRDRFFILQKNLKNYGVNAKV  
FMKDGKNIGNLCPKFKDKILLDAPCSTFAKIGFDLEKSYKEIKNIAKTQKKLLHSALKALKIGGELVYST  
CTPTKEENEEVIEANALKSEFKLELLDIDLENVEAKAGQSEEFAEISKRRILPSLDYDGGFFIAKLRLKC

SEQ ID NO:19

ACE 667 Cj0706

>AnrP327756 (NC\_002163) hypothetical protein Cj0706 [C. jejuni]  
MNKYLEQLVLLSKIDQEIDSYPKIDSINKTLKDAELKIEKINADLEKIDEEIKDIENQKIQNNAHISEF  
SAKIKDLSSKSGVVKTEKEANALKIEEDIAKEQLDAANDEIVRLDKILENKETYKKELEEEKIKQEQNIN  
EIRVSIKSEMEVLEKDRMSVYDKTKLVSEMNOQVLSFYEKIRKWKAKNTAVVPVKKQACYGCFMKIYDKT  
YLSVVKGEEIVTCHPCGRILYKEQEEQN

SEQ ID NO:20

ACE 676 Cj0715

>AnrP684299 (NC\_002163) transthyretin-like periplasmic protein  
[C. jejuni]  
MFSIKKTLILASVPMFLSATEYQLSTHVLDITSGQPAPKVVELYKLEANQQWKKVSEEFTEENGRIGD  
LLPYEKAENRAFGIYKLFKFTKDYTSHKINTFYPFVEVSFELSKDQKHYPITLSPFGYSTYRGS

SEQ ID NO:21

ACE 731 Cj0779

>AnrP191193 (NC\_002163) probable thiol peroxidase [C. jejuni]  
MSIVNFKGNPVKLKGNVSEVGADAPKVNKAKDLSVIEIGAAGKTQIILSVPSLDTPVCATEAREFNKKV  
ASYNGAEVIVVSMDDLFPAMGRFCSTEGIENLSVASDFVAKEFGGEKYGVLINEGALEGLLARAVFVIKEGK  
VAYKELVNEITEMPDIAKLDAFFGGSSCCGGCGCH

## FIG. 4

14/20

SEQ ID NO:22

ACE 853 Cj0909

>AnrP318705 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILLGALFAVNLWAVNDIEVKNAFVKQTPPHAQNSAIFLTIFNNTNKKDIALISAKSDISEVSELHHTH  
IHKDGKMMMQKIPEIIKAHSSTELKSGGYHIMLLKLLKKPIIKDQTKVNLDLKFNNHKTIELKNIDSKEF

SEQ ID NO:23

ACE 937 Cj0994c

>AnrP493933 (NC\_002163) ornithine carbamoyltransferase [C. jejuni]  
MKHFLTLRDFSKEEILSLVNHASELKKEPKLLQDKTLAMIFEKNSTRTRMAFELAITELGGKALFLSSN  
DLQLSRGEPVKDRTARVIGAMVDFVMMRVNKHETLLEFARYSKAPVINALSELYHPTQVLGDLFTIKEWNK  
MQNGIAKVAFIGDSNNMCNSWLITAAILGFEISIAMPKNYKISPEIWEFAMKQALISGAKISLGYDKFEA  
LKDKDVVITDVTWVSMGEENEKERKIKEFEFGMIDEKAMSVANKDAILLHCLPAYRGYEVSEEIFEKHADV  
IFEEARNRLYVVKALLCFLDNQRGRE

SEQ ID NO:24

ACE 941 Cj0998c

>AnrP979073 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILVSVLSSCLLASALSAVSFKEDSLKISFEGYKTKDMIGTKGEFKNVEYKFSKNIKDLASYLKGAKA  
TIKPSNAFMGEGNDIITNNITKVFFPALLGDTDIKVVFQDVIAGENKGVISAKITMDKKSTIVPLTYTIK  
DNKFEAKGQLDLHTFKNGSKALKALSDVAAGHGGISWPLVDISFNADLAE

SEQ ID NO:25

ACE 961 Cj1018c

>AnrP257863 (NC\_002163) branched-chain amino-acid ABC transport  
system periplasmic binding protein [C. jejuni]  
MKKSLILASILSLSLSAAEVKIGVVLPLSGATAAYGQSALEGIKLANSMQSALSNGDKVSLAIDITKGDK  
LESSSGANRLVLSQDKVIGLIGEMVTANTLQVMRVAEDNKIPLIAPAATGDRLLDKKIYSSRVCFMDSFQG  
SSLAKYVFSKLNYSKSAVIVVDQSTDYSLGLAKAFKQYKSNGGQILRILRVNSGDKDFRAIVAQVKSLNP  
EFIFLPLYSEASLFARQSKLAGLNI PMGSADGVADQTFISLAGDASEGYIFTDSFDANNPTTKLSKEFI  
SVYEKAKGTKEVPNFSAMGADAYFVMLNAMNACVENLTSKCVNEKIHQTKNYQGVSGVISIDQGTGNATRS  
VVVKEIKNQKQNYKDIINP

SEQ ID NO:26

ACE 962 Cj1019c

>AnrP326257 (NC\_002163) branched-chain amino-acid ABC transport  
system periplasmic binding protein [C. jejuni]  
MKKLTLTLVSLTMVNCLYAKDINIGVVLPLTGTVAAYGQDVFNGLIELANKLQPKLSNGDVIKLITIDTKG  
DKLETSNGVNRILATDKVLGIIGEAATPNTIQAISIAEKKIPLIAPVASGDKLLDKKKYASRVCFKDSF  
QGDKFATYVSKDLGLKNAVIIIDQSNVYSLGLARAFENSFKNNGGKIIKKLVINSNGDKDFRAVVSQKSL  
NPDFVYMPIYHPEAALIAQARQIGFDKLLVAGDGVNNQTFIDLGGSANVGVIFTDSDFDYNSPSTQLGKD  
FVAAYEKVKGTKELPAFSAMGADAYFVMLNAMNACVDNLSSECINSKIHQTKDFQAVGGVISIDESGNAI  
RSVVIKEIQNQKQNYKTIINP

SEQ ID NO:27

ACE 984 Cj1041c

>AnrP198268 (NC\_002163) putative periplasmic ATP/GTP-binding protein  
[C. jejuni]  
MKKYVLSLALLGSLGASELKQEFDFGKSPESIFVDKNYVVVSNVGEKLEPLAKDNDGFISKLDKNGKV  
LEYKFLTHLNA PKGMMIEIGKTLVVDIDVLRGFDLKTKEIFNLPIKGAIFLNDIEKLDDNTLLVSDTGT  
GLILKVDLKTQYDELLKLDLAKFGGPNGLYLDRKKHKLFIAGYHPDGVSGGVVMAYDLNTKELSIKNE  
KESYDGVIPYKDGLLVSSWGNLNGYIYNLDNVKSVKLELPLMKGPADIFIEGNILWIPKMVEGKIFKVE  
LNK

SEQ ID NO:28

ACE 1094 Cj1153

>AnrP385049 (NC\_002163) putative periplasmic cytochrome C [C. jejuni]  
MKKLLVVSALACLGVSFAADGATLFKKCAVCHGANADKVYLNKVPALKTLSSAERLQYMKEYSEGKRNA  
YGQGAIMKLLNLKGLTEEDFKAIEAHITLTK

SEQ ID NO:29

ACE 1155 Cj1214c

>AnrP470247 (NC\_002163) hypothetical protein Cj1214c [C. jejuni]  
MFKTIVCFLALNLSLFAVGFDLKPIKSELVKVDDIYGVIKDSDDIKLYSSGVVVQHFSNSQSIIARASVI  
DKKNGLAKLEFSVFSALKQDALPLPNVL PKVGDEVVLNFLYDRGLVIAPDEQTYNELVREFPQIYFTHID  
IFGAQLIRTATLSPKRSDFRQFCDDNAVIGILVVALENHAEVVDQDFNKLYEVPISKPTSVQVPFYSRIG  
GYKSNFFDFNSQEIGNYYRYDALINLPKVQ

FIG. 4

15/20

SEQ ID NO:30

ACE 1227 Cj1287c

&gt;AnrP530915 (NC\_002163) malate oxidoreductase [C. jejuni]

MNLKEEALKYHLGGKIDIVPSKPMATSYDL SLAYSPGVAEPCLEIAKDNELAYTYTNKANLVAIVSDGSA  
VLGLGNIGAQAQSKPVMGKACLFKKFANVNAYDIEINVHSIEEIVNFCKALAPTVGGINLEDIAAPKCFE  
IEAALQDLGIPVMHDDQHGTAIISTAGLMNAMEISGKKFKDIKVVVSGAGAAGIASAKMYRNLGVENIIL  
VDSKGVISKDRNDLTPQKLEFAVDSKEKTLKEVLKGADVFLGLSAPKILDDDEMVL SMAKDPVIFALANPI  
PEVMPEDVARLRKDAIVGTGRSDYPNQINNVLGFPFIFRGALDVRASKITENMKVAAAKALADLAKLPVS  
DAVKKAYNLSTLEFGRDYPVIPPFDERVKAAVSTAVAAA VKG DVAKVKNFDEKAYFESLK

SEQ ID NO:31

ACE 1320 Cj1380

&gt;AnrP108083 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKLSLILVCSASLFAASNSEISDFYSKSIKAQFPNATVSVSNRQKVGNTGFESVIVSVELNGQKQENIL  
FTKDSLITPDIDLTKGISYAQYEMKKFQEARENFTKNAKAVAQKETMVI ALGDKNKPAIYVFS DPECP  
YCREHLAQIDDELKNYQVNYILTPVHGKSAFEKSALIYKEAKKAKNDKEKIAILNKYYDANIKNYPKVSD  
AELKEVFSLEYKRSLSATPTTIK

SEQ ID NO:32

ACE 1431 Cj1496c

&gt;AnrP947055 (NC\_002163) putative periplasmic protein [C. jejuni]

MIKKFILLVFISSVVFAGAEQDCEQYFEARKAQIELQTRFDEARQSLEAYKASFEALQKERLENLEKKEA  
EVNATLAKIEELKLENARLVEEQQKILNSINDKTQGRVKEIYSQMKDAAIADVLSQMDAEDASKIMLSLE  
SRKISGVL SKMDPKKASELTLLLNLDNNASN

SEQ ID NO:33

ACE 1449 Cj1516

&gt;AnrP407504 (NC\_002163) putative periplasmic oxidoreductase [C. jejuni]

MNRRNFLKFNALTLASMGVAYANPMHDMHSMHKNHSINHDLDTSFINFAPKNLKLDPKQFPQGEILKAL  
PLLKNESKEKNIFRATLEIKENHIELIKGKKTLPFYTYNGLVPAPKIEVFEGDKLEILVKNKLKEATTIHW  
HGVPVPDQDQSPHPDILAGEERIYRFEIPQDSAGTYWYHPHYTASKQVFMGLAGAFVIKAKKDALSH  
LKEKDL MISDLRLDENAQIPNNLNDWLN GREGEFVLINGQFKPKIKLATNERIRIYNATAARYLNLRIQ  
GAKFILVGTDDGLIEKAIYKEELFLSPASRVEVLIDAPKDG NFKLESAYYDRDKMMVKEESNTLFLANIN  
LKKEKLELPKNLKI FKP LEEPKEFK EI IMSEDHMQMHGMMGKSENEKIALASMF LINGKSYDLKRIDLS  
SKLGVVEDWIVINKSHMDHPFHIGTQFELISSKLNGKVQKAEFRAFRDTINVRPNEELRLKMKQDFKGL  
RMYHCHILEHEDLGMMGNLEVKE

SEQ ID NO:34

ACE 1469 Cj1540

&gt;AnrP818860 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKIISLALALALSASAAELKMATTTSTDNTGLLDALKPLYEKESGNTLKWVAVGTGAALKMGEDCNADV  
LFVHSPKAEKEFMKKGFGVDRTPVMYNDFII IADKSLASKFKGNL KESLELIKNEKLTFFISRGDKSGTD  
NKEKSLWKNLGGVPEKQSWYQQSGQMLASIKIAEBEKKGVILTDRGTYIKYEANEKGKPNLVIVNEGDDS  
LKNFYSVIATNPKHKCNVNYTEASKFIKWVTS DKTLNFIADFKLLNKPLFVIDAKTRKD

SEQ ID NO:35

ACE 1584 Cj1659

&gt;AnrP294550 (NC\_002163) periplasmic protein p19 [C. jejuni]

MIKKVLSVVA AAVISTNLFAGEVPIGDPKELNGMEIAAVYLQPIEMEPRGIDL AASLADIHLEAD IHAL  
KNNPNNGFPEGFWMPYLTIAYELKN TDTGAIKRGTLMPVADDGPHYGANIAMEKDKKGGFGVGN YELTFY  
ISNPEKQGGFRHVD EETGVGKWFEPPKV DYKF KYTGTPK

SEQ ID NO:36

ACE 1569 Cj1643

&gt;AnrP407676 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKILIIICMLF TLSFGIERPKFEDFLAGYERNKASMLN YEGMPAFALSENLLAVLKQPN AKLNKYVKYDP  
FLNLVYLVRTDFSLIPTPMGDEEKLTRNDWVG IWDPNKPYIGHIKYLAQNI DEKDQLDFNSKIGLLGTPCC  
EMMGIALNNSFIGNRYLKHFMKYNDVYWGDIGVDFV VRENKIYVNNVRKNPQFLINDQVISVDGLPAND  
LRKLNEKILFADRGSTLYFQVLRDNMDLNI STEVFAKDL SKFNL PDSKPKPKITNFTSNLGLTVNASLVV  
TKIDPKSKVSNAGFMVGDKILRVNNIILNNFKELQNILSAGNDFSILIERKSTKLPLSNFN NELGNNANS  
GGDGKQFFIRLTK

SEQ ID NO:37

ACE 96 Cj0105

&gt;AnrP758295 (NC\_002163) ATP synthase F1 sector alpha subunit [C. jejuni]

MKFKADEISSIIKERIENFDLNL EIEETGKIIISVADGVAKVYGLKNIMAGEMVEFENGDKGMALNLEESS  
VGIVILGKGEGLEK GASVKRLKLLKVPVGEALIGRVNALGEPIDAKGVINANEYRFVEEKAKGIMARK

FIG. 4

16/20

SVHEPLHTGIKALDALVPIGRGQRELIIGDRQTGKTTVAVDTIISQRGQGVICIYVAIGQKQSTVAQVVK  
RLEEHGAMEYTIIVNAGASDPAALQYLAPYTGVTMGEFFRDNAKHALIVYDDL SKHAVAYREMSLILRRP  
PGREAYPGDVLYLHSLRLERASKLNDELGAGSLTALPIIETQAGDVSAIYPTNVISITDGOIFLETDLFN  
SGIRPAINVGLSVSRVGGAAQIKATKQVSGTLRLDLAQYRELQAFQAQFASDLDEASRKQLERGQRMVELL  
KQPPYSPLSVEKQVVLIFAGTKGFLDDIAVSRIKEFEDGIYPFIEAKHPDIFEQIRSKKALDSDLEEKLA  
KAINFEKANHL

SEQ ID NO:38

ACE 165 Cj0175

>AnrP550554 (NC\_002163) putative iron-uptake ABC transport system  
periplasmic iron

MKKIFFMFLTAVSFLGASELNIYSARHYNADFEI IKKFEEKTGIKVNHTQAKASELIKRLSLEGSNSPAD  
IFITADISNLTAKNLGLLSPVSSKYLEEFIPAHLRDKDKKEWFATTKRARI IAYNKNTNIDISKMKNYED  
LAKAEFKGEIVMRSATAPYSKTLASIIANDGNKEAKAWAGVLENLATNPKGGDRDQARQVFAGEAKFA  
VMNTYYIGLLKNSKNPKDVEVGNSLGIIFPNQDNRGTHINISGIAMTKSSKNQDAAKKFMEFMLSPEIQK  
ILTDSNYEFPPIRNDVELSQTVMKDFGTFKEDQIPVSKIAENIKEAVKIYDEVGFR

SEQ ID NO:39

ACE 257 Cj0283c

>AnrP602342 (NC\_002163) chemotaxis protein [C. jejuni]

MSNEKLEQILQKQQTQ MAGPDVDQREDDIIQLVGVFVVGDEEYAIPI LNIQEI IKPIEYTRVPSVPDYVLG  
VFNMGRGNMPLIDLQARFHLGSSKMTPTQTRYIVLRGETNGTGVGGNAGFVIDRLTEAIKIHRNRIDPPPE  
TLVKDKGMIYGIGKRDENILTILKVEALLKREF

SEQ ID NO:40

ACE 277 Cj0303c

>AnrP311344 (NC\_002163) putative molybdate-binding lipoprotein  
[C. jejuni]

MKKFVVFVFGILLFVSCNLNAQNLSIFVASSASKAMSEVKDEFLKTHPEDKIELVFGASGKYVELLKQGREF  
DLFFSADTKYAKAIYDDKNALIKPKVYVLGVLALYSLDENLQGGVENLKEKANKITHLSIANPKVAPYG  
VAAKEVLENLGLNELLDKIVLGENISVPVLHVDSKNSDIAIVAYSLVSSINHPKGKAVIIDAKYFSPLE  
QSYVITKYAKDKKLAFEFNEFIGSSKAKEIFKKYGFSTP

SEQ ID NO:41

ACE 308 Cj0334

>AnrP505685 (NC\_002163) alkyl hydroperoxide reductase [C. jejuni]

MIVTKKALDFTAPAVLGNNIEIVQDFNLYKNIGPKGAVVFFYPKDFTFVCPSEIIAFDKRYQEFKNRGIEV  
IGISGDNEFSHFAWKNTPVNQGGIGQVKFPLVADLTQKIARNFDVLYAEAVLRGSFLLDADGTVRHAVV  
NDLPLGRNIDEMLRMVDTMLFTNEHGEVCPAGWNKGDEGMKANPKGVAEYLGKNEAKL

SEQ ID NO:42

ACE 388 Cj0415

>AnrP72219 (NC\_002163) putative oxidoreductase subunit [C. jejuni]

MAEVLKKVDVTVGAGWTGIVAAELTKAGLNVLSLGRHMQSTENFN YIHDEWRYGINYGLMQDCSKDT  
VTFRHDPGSLALPYRKMGSLGNNVGGAGVHWNGWTFRFPYDFEIQTLSKQRYGNKLGNDYTLQDWGV  
TYKDMEPYDRFEKTCGVSGEPNPLAEKMGAFRSPYPQEPLENTKMLKRFESA AKSSNLHTYRLPASNS  
KGGYTNPDGQDLAPCQYCA YCERFGCEYGAKASPLNTVIPKAMSTGKYTIRTYSNVTQILKKGKVTGVK  
FVDTRTMKEYITQPADIVVLTSYMFNNAKLLMVSNIGE QYDPKTGKGT LGRNYCYQMMNGTTAFFDEQFNT  
FMGSGALGTTSDDFNGDNFDHSKEKFLHGAMIYSVQLGTRPIQSAPLPAGAPTWGA EFKKALN VNFTRAI  
TVGGQGASLPHKNLYLSLDPTYKDAFGMPLLRLTYNFTDQDRALHKFITDKTAEVAKRMQGVKSIKKGAY  
LKDYSVVPYQSTHNTGGTTMGADRET SVVNTYLQHWADNL FVVGAGNFQHNSGYNPTDTVGALAYRCAE  
GILKYHKSGKSLA

SEQ ID NO:43

ACE 393 Cj0420

>AnrP490750 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKVLLSSLVAVSLLSTGLFAKEYTLDKAHTDVGFKIKHLQISNVKGNFKDYSAVIDFDPASAEFKKLDX<sub>1</sub>  
TIKIASVNTENQTRDNHLQDDFFKAKKYPDMFTMKKYEKIDNEKGKMTGTLTITAGVSKDIVLDX<sub>2</sub>EIGG  
VAKGKDGEKIGFSLNGKIKRSDPKFAX<sub>3</sub>STSTITLSDDINLNIEVEANEK

wherein X<sub>1</sub> is V or A, and X<sub>2</sub> is A or T, and X<sub>3</sub> is T or A

SEQ ID NO:44

ACE 711 Cj0759

>AnrP586832 (NC\_002163) heat shock protein dnaK [C. jejuni]

MSKVI GIDLGTNSCVAVYERGESKVIPNKEGKNTTPSVVAFTDKGEVLVGDSAKRQAVTNPEKTIYSIK  
RIMGLMINEDAAKEAKNRLPYHITERNGACAIEIAGKIYTPQEISAKVLMKLKEDAEAF LGESVTDVAIT



FIG. 4

17/20

VPAFYND AQRKATKEAGTIAGLNVLRINEPTSAALAYGLDKKDSEKIVVYDLGGGTFDVTVLETGDNVV  
 EVLATGGNAFLGGDDFDNKLIDFLANEFKDETGIDLKNDVMALQRLKEAAENAKKELSSANETEINLPFI  
 TADASGPKHLVKKLTRAKFEGMIDSLVAETITKINEVVS DAGLKKDEIKEIVMVGGS TRVPLVQEEVKKA  
 FNKDLNKSVPDEVVAIGAAIQGAVIKGDVKDVL LLDVTPLSLGIETLGGVMTKIIIEKGT TIPTKKEQVF  
 STAEDNQSAVTINVLQGEREF SRDNKSLGNFNLEGI PPAPRGMPQIEVTFDIDANGILT VSAKDKATGKA  
 QEIKITGSSSGLSEEEINNMVKDAELHKEEDKKRKEAVDARNAADSLAHQVEKSLSELGEKVAAADKENIQ  
 KALDDLRETLKNQNASKEEIESKMKALSEVSHKLAENMYKKDEPNTANDKKKKDDDDVIDAEVE

SEQ ID NO:45

ACE 723 Cj0771c

>AnrP524051 (NC\_002163) putative periplasmic protein [C. jejuni]  
 MNLFKIIILACILNLSSLFAQNITIGATPNPFGSLLELMKDDFKNKG YELKIVEFSDYILPNRALEEKEL  
 DANLYQHKKPFL EEFNLKKGSNLIATTPVLIAPVGVYSKIKNLENLKEGARVAIPNDATNESRALELEK  
 AKLIELNKNLTPLDINKNPKKLKFIELKAAQLPRALDDVDIAIINSNFALGAGLNPSKDTIFREDKNS  
 PYVNVVVRSEGNSEKTKVIDEILRSDFKAIINEHYKDILIPAF

SEQ ID NO:46

ACE 724 Cj0772c

>AnrP579672 (NC\_002163) putative periplasmic protein [C. jejuni]  
 MKIKSLFIASITLSL NANALETITVAATPVPHA EILEQVKPDLEKQGYKLEIKEFTDYVLPNLAVDNGE  
 ADANFFQHTPYLEEFNKNKGTKLIKVA AIIHIEPMAVYSKKYKSLDDIKEGVKIAIPNDPTNESRALDIIA  
 KKGLVKFKDKALKTPLDIIIDNPKKIKFVELKPAQLPRALNDVDFAVINSNYALSANLNPAKDSVFIEDKE  
 SPYANILVVRVGHENDPKIKALI QALQSDKIKQFII EKYNGSVLP AF

SEQ ID NO:47

ACE 819 Cj0872

>AnrP694298 (NC\_002163) putative protein disulphide isomerase  
 [C. jejuni]

MRNFFCKFVLALVFYSSFALANNSFITLNPSPSSSENSVIEAFSYKCIHCYNHHKFGTLEKLREAFPNLH  
 FKLVPVSLMNGEFSKEMNELFTFAQYKDEQNGKDASYSDSLSHKLADVYFVSYFLNKQRNFSNLDEFYDI  
 GLKAMNVNKN EVLNFLNTPKAKEILSEFORANDIAKTYGTPAFVVGNGKYQINPSAINSMQDLEDLVKKLS  
 NMK

SEQ ID NO:48

ACE 1060 Cj1118c

>AnrP515430 (NC\_002163) chemotaxis regulatory protein [C. jejuni]  
 MKLLVDDSSSTMRRRIKNTLTRLGHDDVLEAEHGV EAWDLLTKNEDVKVLITDWNMP EMMNGLELVKKVRA  
 EKKYEDMPIIMVTTEGGKAEVITALKAGVNNYIVKPF TPQVLKEKLEDVLGTGSGEGAAE

SEQ ID NO:49

ACE 1169 Cj1228c

>AnrP679791 (NC\_002163) serine protease (protease DO) [C. jejuni]  
 MKKIFLSLSLASALFAASINFNESTATANRVNPAAGNAVLSYHDSIKDAKKS VVNISTSKTITRANRPS  
 LDDFFNDPYFKQFFDFDFSQRKGKNDKEVSSLSGSGVIISKDGYIVTNHVVDDADTITVNLPGSDIEYK  
 AKLIGKDPKTDLAVIKIEANNLSAITFTNSDDLMEGDVVFALGNPFGVGF SVTSGIISALNKDNIGLNQY  
 ENFIQT DASINPGNSGGALVDSRGYLVGINSAILSRGGGNGIGFAIPSNMVKDIAKKLIEKGKIDRGFL  
 GVTILALQGD TTKAYKNQEGALITDVQKGSSADEAGLKRGLVTKVNDKVIKSPIDLKNYIGTLEIGQKI  
 SLSYERDGENKQASFILKGEKENPKGVQSDLIDGLSLRNLDPR LKDR LQIPKDVNGVLVDSVKEKSKGKN  
 SGFQEGDIIIGVGQSEIKNLKDLEQALKQVNKKEFTKVWVYRNGFATLLVLK

SEQ ID NO:50

ACE 1510 Cj1584c

>AnrP355324 (NC\_002163) putative peptide ABC-transport system  
 periplasmic peptide- [C. jejuni]

MLRWVLLFLLFLLNLEAKIPKDTLIIAVENETARINPAYSEDHDAVINLVFSGLTRFDENMSLKPDLAKS  
 WDISKDGLVYDIFLRDDVLWHDGVKFSADDVKFSIEAFKNPKNNSSIYVNFEDIKSVEILNPSHVKITLF  
 KPYPAFLDALSIGMLPKHLENNENLNTSSFNQNP IGTGPYKFVKWKKG EYVEFKANEH FYLDKVKTPRLI  
 IKHIFDPSIASAELKNGKIDAALIDVSLNIFKN DENFGILREKSADYRALMFNL DNEFLKDLKVRQALN  
 YAVDKESIVKNLLHDYAFVANHPLERSWANSKNFKIYKYDPKKAEDLLVSAGFKKNKDG NF EKDGKILEF  
 EIWAMSNDPLRVSLAGILQSEFRKIGVVSKVVAKPAGSFDYSKVDSFLIGWGSPLDPDFHTFRVFESSQD  
 SALNDEGWNFGHYHDKKVDIALQKARNTSNLEERKKYKDFIDALYENPPFIFLAYLDFALVYNKDLKGI  
 KTRTLGHG HVGFTWNVYEW SK

SEQ ID NO:51

ACE 1543 Cj1617

>AnrP111949 (NC\_002163) putative haemin uptake system periplasmic  
 haemin-binding protein [C. jejuni]

FIG. 4

18/20

MKKILIIMSLFLIALNAKERLVVLDPASIEITLFMLKAEDQIVGIATLQHSNIYPKDQTSKLTSGTFSNP  
SLEKIVALKPSLVILSSYSNLNLEGLKNFGIKSINLKAERLEDITKNITTLGQITKKEKEAELLKQEFNQ  
KFKKLSDKPLNKSATYLYSSNPLMAFNDNSLIADILRLIGIKNLSPQSQISRPVISAEBYILKQNPDLIL  
GINAKNNLLDTNALLKNTKAVKTGSIYFNKDTPIILLRLSPKIIDRIQEFKTKLENNNF

## Fragments of AnrP630851 (Cj0092)

SEQ ID NO:52: TQQDINTQNEMSDASTKDITPKSIEDFFEEFAD  
SEQ ID NO:53: GITKDGKTFYTGKSTVAVNDTDPQF  
SEQ ID NO:54: RIATSKIQNYEADNSTNAKEFDELPGGDKVDQILNK  
SEQ ID NO:55: QLDKALKDLGIDTNSLSEDRKKTLLKQEFNLKMTN  
SEQ ID NO:56: TIVTQRRGEYDVGVAVISNKTQLAKD  
SEQ ID NO:57: AISEYLPKDTKGFLNEYGIRLVYDEN  
SEQ ID NO:58: DPSNAKKTNILEDRAKET  
SEQ ID NO:59: LSLKDERTTGDYEEII  
SEQ ID NO:60: VNDSSSQEQTONITN  
SEQ ID NO:61: TLKKWSYTSENG  
SEQ ID NO:62: YSYENLANTNEALNSKSNATKNEAKKSSSIQRS

## Fragments of AnrP57234 (Cj0143c)

SEQ ID NO:63: IFYTFTQAKNLEQEONTSSNLVSVS  
SEQ ID NO:64: LPPNSNEHNFEFKPSTMKKLEKSDIYF  
SEQ ID NO:65: LEFEKVFTDKFKQNF PKLQVINMQ  
SEQ ID NO:66: IQTHDTHEHSHEHEHHEGHFDPHTWL  
SEQ ID NO:67: DTLIQKYPQENLYKENLKD  
SEQ ID NO:68: SKLEKLKNRE  
SEQ ID NO:69: YFAKRYNL  
SEQ ID NO:70: GKEPKSKDLQK  
SEQ ID NO:71: LMKDKNLK  
SEQ ID NO:72: QNGFPENAAKTLAKECDAKIYK  
SEQ ID NO:73: DHLSYDWENELLKTADAF

## Fragments of AnrP490750 (Cj0420)

SEQ ID NO:74: FAKEYTLDKAHTDVGFKIKHLQI  
SEQ ID NO:75: VKGNFKDYSAVIDFDPASAEFKKLDVTI  
SEQ ID NO:76: SVNTENQTRDNHLQQDDFF  
SEQ ID NO:77: DFFKAKKYPDMTFTM  
SEQ ID NO:78: TFTMKKYEKIDNEKGKMT  
SEQ ID NO:79: GVAKGKDGKEKIGF  
SEQ ID NO:80: LNGKIKRSDFKFATS  
SEQ ID NO:81: EVEANEK

## Fragments of AnrP684299 (Cj0715)

SEQ ID NO:82: LSATEYQLSTHV  
SEQ ID NO:83: ITSGQPAPKVVKVELYK  
SEQ ID NO:84: LEANQQWKKVSEEFTEENGRIG  
SEQ ID NO:85: LLPYEKAENRAFG  
SEQ ID NO:86: KFFT KDYYTSHKINTF  
SEQ ID NO:87: SFELSKDQKHVPI  
SEQ ID NO:88: FGYSTYRGS

## Fragments of AnrP579672 (Cj0772c)

SEQ ID NO:89: ILEQVKPDLEKQGYKLEIKFTDY  
SEQ ID NO:90: GEADANFFQHTPYLEEFNKNKGT  
SEQ ID NO:91: AVYSKKYKSLDDIKE  
SEQ ID NO:92: IPNDPTNESRAL  
SEQ ID NO:93: KGLVKFKDKALKTPLDIIDNPKKIKFVELKPAQLPRALN  
SEQ ID NO:94: ANLNPAKDSVFIEDKESPYAN  
SEQ ID NO:95: GHENDPKIKALIQALQSDKIKQFIIEKYN

## Fragments of AnrP257863 (Cj1018c)

SEQ ID NO:96: NGDKVSLAIIDTKGDKLESSSGANRLVSQDK  
SEQ ID NO:97: VAEDNKIPLIAPAATGDRLLDKKIYSSRVC  
SEQ ID NO:98: YVFSKLNYSKSAVIVDQSTDYSLGLAKAFEKQYKSNGGQ  
SEQ ID NO:99: NSGDKDFRAIVAQVKSINPEFIFLPLYSEASLFARQSKLA  
SEQ ID NO:100: GYIFTDSFDANNPTTKLSKEFISVYEKAKGTKEVPNFSAMG

FIG. 4

19/20

SEQ ID NO:101: VNEKIHQTKNYQGV

SEQ ID NO:102: QTGNATRSVVVKEIKNQKQNYKDIIN

Fragments of AnrP108083 (Cj1380)

SEQ ID NO:103: ELNGQKQENILFTK

SEQ ID NO:104: SYAQEYEMKKFQEAARENFTKNAKAVAQKETM

SEQ ID NO:105: VIALGDKNKPAI

SEQ ID NO:106: HLAQIDDELKQYQV

SEQ ID NO:107: YKEAKKAKNDKEKIAI

SEQ ID NO:108: LNKYYDANIKNYPKVSDAELKEVFSLEYEKYRSL

Fragments of AnrP407676 (Cj1643)

SEQ ID NO:109: GIERPKFEDFLAGYERNKASMLN

SEQ ID NO:110: LKQPNAKLNKYVKYDPFL

SEQ ID NO:111: PTPMGDEEKLTRNDWVGWDPNKPPI

SEQ ID NO:112: AQNIDEKDQLDFNSK

SEQ ID NO:113: GNRYLKHFMYNDVY

SEQ ID NO:114: VVRENKIYVNNVRKNPQFL

SEQ ID NO:115: PANDLRKLNEK

SEQ ID NO:116: DRGSTLYFQVLRDNMDLN

SEQ ID NO:117: AKDLSKFNLPSKPKPKI

SEQ ID NO:118: TKIDPKSKVSNAG

SEQ ID NO:119: LIERKSTKLPLSNFN

SEQ ID NO:120:

ACE 393, ML53 (0:19)DNA

ATGAAAAAGTTTTATTGAGTTCATTGGTTGCGGTGTCTTTGTTAAGCACAGGTTTGTTCGTAAGAATATACTTTAGAT  
TAAAGCACATACAGATGTAGGTTTAAAAATCAAACATTTACAAATTAGCAATGTAAAAGGAAATTTCAAAGATTATCTG  
CGGTGATTGATTTTGACCCGTGCGAGTGCTGAATTTAAAAAGCTTGATGCAACTATAAAAAATCGCATCTGTAAATACAGAA  
AATCAAACAAGAGATAATCACTTACAGCAAGATGATTTTTTCAAAGCAAAAAAATATCCTGATATGACTTTTACAATGAA  
AAAATATGAAAAAATCGATAATGAAAAAGGTAAAATGACAGGAACTTTAACTATAGCTGGAGTTTCTAAAGATATCGTTT  
TAGATACTGAAATCGGCGGTGTAGCTAAAGGCAAGATGGAAAAGAAAAAATAGGCTTTTCTTAAATGGAAAAATCAAA  
CGCTCTGATTTTAAATTTGCAGCAAGTACTTCAACTATTACTTTAAGTGATGATATTAATTTAAATATCGAAGTTGAAGC  
GAACGAAAAA

SEQ ID NO:121: DIVLDTEIGGVAK

SEQ ID NO:122: FAASTSTITLSDDINLNIEVEANEK

SEQ ID NO:123: LDATIK

### Table 1

[illegible]